

The land development process is often long and challenging. Real estate professionals often serve an important role explaining the requirements involved and helping their clients through this process. This fact sheet provides an overview of how low impact development (LID) stormwater management techniques fit into the development process in Washington.

**Read through all seven fact sheets and share appropriate ones with your clients, property managers, and maintenance personnel!**

Look for the other helpful fact sheets in this series:

1. Low Impact Development
2. LID Stormwater Regulations
3. LID Development Process
4. Pavement Maintenance
5. Rain Garden Maintenance
6. Rain Garden Construction Checklist
7. Rain Garden Construction Sequencing

## Plan LID

The first step of any development process is creating the initial concept. Advising your clients to incorporate LID Best Management Practices (BMPs)—such as retaining native vegetation and reducing impervious surfaces—during this first step can often prevent unnecessary activities, save money, and increase profit margins.

Beginning in 2015, many local jurisdictions, covered by a Municipal Stormwater Permit, will strive to make LID the preferred and commonly-used approach to site development. (See Fact Sheet #2 for more details.) Suggest that your development clients hold a pre-design meeting with the local jurisdiction to learn the exact stormwater requirements that will apply to their building project.

Most local governments will require two stormwater plan components: (1) addressing prevention of stormwater discharges during construction and (2) addressing the long-term stormwater management BMPs that will be used once the project is complete. See the resources at the end of this fact sheet to help guide clients in selecting appropriate LID BMPs.

## Design LID

Depending on the scale of the project, your client may need to work with an architectural and engineering firm to develop stormwater management plans that meet the state and local requirements. Advise your client to check work histories and training carefully when hiring consultants. The chosen firm should be familiar with both existing stormwater requirements as well as the new LID requirements. There are many training programs available to designers, engineers, architects, and installers about LID overall and individual specialties.

For very small projects, the BMPs selected may be very simple, and might even be able to be done by the landowner in cooperation with knowledgeable professionals.

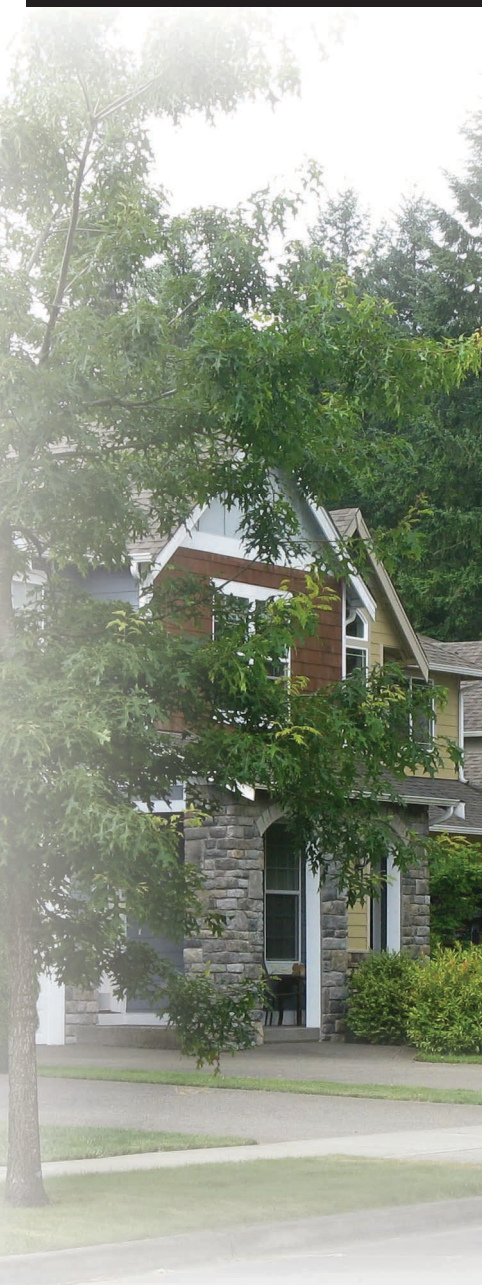
Whether projects are big or small, landowners need to be as informed as possible about the stormwater requirements and be sure they're working with knowledgeable consultants and contractors.

## Bid LID

As with any development project, negotiating a sound contract and providing ongoing oversight of contractors is essential. Requiring contractors to submit their LID training credentials with their bid documents can help your client select a qualified contractor. Choosing contractors with strong experience installing LID BMPs can prevent maintenance issues later on. Many industry trade groups offer different levels of certification. Contact the previous clients of prospective contractors to be sure projects were done successfully and choose contractors with a proven track record.

Contract provisions should include guidance on protecting vegetation, soils, and newly installed LID BMPs—with clearly delineated penalties for failure to comply. Signs can be posted on tree-protection fences providing the monetary value and penalty for damage to the trees.

An operations & maintenance (O&M) manual will generally be prepared by contractors installing LID BMPs. Include this requirement in bid packages and all contracts.



## Build LID

It's critical to ensure everyone understands the new LID techniques on the project. Team communication should be initiated early and frequently. Many LID BMPs are focused on preventing problems in the first place; for instance: retaining vegetation and soils, protecting trees and shrubs from damage from equipment, and preventing construction sediment from entering local waterways. Every worker on the development site needs to understand those prevention principles and know how to protect newly installed LID BMPs during construction.

Bringing in other team members, such as landscapers, early in the process can result in more successful projects. Many LID BMPs concern plants and soils, and when experienced landscapers provide early input to designs and plans, development projects can save money, reduce maintenance costs, and create more attractive and functional LID BMPs.

**Good communication with all members of the development team is critical every step of the way!**

Passing along information to your client about construction sequencing can help ensure successful installation of LID BMPs. Contracts should require following the established construction sequencing guidelines for each LID BMP. Guidance on construction sequencing can be found in the resources noted at the end of this fact sheet (and Fact Sheet #7 in this series).

## Market & Sell LID

Neighborhoods and homes built with LID features consistently demonstrate higher property values than comparable neighborhoods and homes without those features. Green spaces and LID BMPs can increase neighborhood desirability and add curb appeal. There are many benefits of LID, such as:

- Increased green space or developable lots since LID BMPs often take up less space than traditional stormwater controls.
- Reduced neighborhood noise through the use of vegetation and permeable pavements.
- Less expensive landscape and long-term maintenance costs since retaining vegetation avoids landscape installation costs, and weeding protected vegetation areas, rain gardens, and bioretention areas is usually less expensive than mowing and irrigating.
- Reduced fertilizer and water use because soils are amended with organics.

**Explaining the benefits of LID to your clients can help them understand:**

- Why they should consider developing a project with LID BMPs or purchasing a parcel with an LID BMP.
- What returns they can expect on their investment if they use LID BMPs or have LID BMPs on their land.
- How they can market their development project when finalized.
- How they can save money by using LID principles throughout their development project.

## Maintain LID

After a project is built and sold, the final owner and future owners will need to understand the maintenance requirements for the LID BMPs (refer to Fact Sheets #4 & #5 for maintenance tips). Most LID BMPs need either an operations and maintenance (O&M) manual or maintenance instructions. For some BMPs, there may be a maintenance log that is required to be kept up to date.

The O&M manual is required to be easily accessible and will transfer to new owners when the property is sold. Real estate brokers representing a property with LID BMPs should be sure the manual is available to share with potential new buyers, and to allow the manual's legal transfer to new owners to take place at the time the property changes hands.

## Technical Resources Available

Share with your development clients these and other technical resources that explain how to implement the new LID requirements:

**Western Washington Guidance:**

- *2012 Stormwater Management Manual for Western Washington* (Dept. of Ecology): <http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>
- *2012 Low Impact Development Technical Guidance Manual for Puget Sound* (WSU & Puget Sound Partnership): [http://www.psp.wa.gov/LID\\_manual.php](http://www.psp.wa.gov/LID_manual.php)
- *Rain Garden Handbook for Western Washington*, rain garden videos, and other resources: <http://raingarden.wsu.edu/>
- The state's new minimum LID requirement is summarized in a flow chart at this link: <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/workshopPPTs/LIDFlowChart.pdf>. **The details in the local codes may vary.**

**Eastern Washington Guidance:**

- *Eastern Washington Low Impact Development Guidance Manual*: <http://www.wastormwatercenter.org/eastern-washington-stormwater-resources>
- *Yakima Regional Low Impact Development Stormwater Design Manual*: <http://www.yakimacounty.us/stormwater/>

